CLAIMS

I claim:

- 1 1. An electronic device, comprising:
- 2 a first substrate;
- a second substrate; and
- a flexible connector attached between the first and second
- substrates by a plurality of contacts on a first and a second
- 6 surface of the connector.
 - 2. The electronic device of claim 1, wherein select contacts on the first surface of the connector are off-set from select contacts on the second surface of the connector.
 - 3. The electronic device of claim 1, wherein the connector comprises a laminate material.
 - 4. The electronic device of claim 3, wherein the laminate
- 2 material comprises:
- 3 a core;

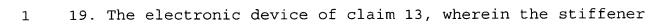
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- a dielectric material surrounding the core; and
- 5 a solder mask.

- 1 5. The electronic device of claim 4, wherein the laminate further
- 2 includes a plated through hole.
- 1 6. The electronic device of claim 4, further including a
- 2 connection layer between at least one contact on the first
- 3 surface and at least one contact on the second surface.
- 7. The electronic device of claim 6, further including a ground shield over the connection layer.
 - 8. The electronic device of claim 4, wherein the core comprises a material selected from the group consisting of: copper-invar-copper, copper, stainless steel, nickel, iron and molybdenum.
 - 9. The electronic device of claim 4, wherein the dielectric material comprises polyimide.
- 1 10. The electronic device of claim 1, wherein the contacts
- 2 comprise ball grid array connections.
- 1 11. The electronic device of claim 1, wherein the first substrate
- 2 comprises a chip package.



- 2 substrate comprises a printed circuit board.
- 1 13. The electronic device of claim 1, further comprising a
- 2 stiffener frame attached to the connector.
- 1 14. The electronic device of claim 13, wherein the stiffener
- frame is adhesively attached to the connector.
- 1 15. The electronic device of claim 13, wherein the stiffener 2 frame surrounds a perimeter of the connector.
 - 16. The electronic device of claim 13, wherein the stiffener frame is removably attached to the connector.
 - 17. The electronic device of claim 13, wherein the stiffener frame is attached to a surface of the connector.
- 1 18. The electronic device of claim 13, wherein the stiffener
- frame comprises a material selected from the group consisting of:
- 3 plastic, metal and ceramic.



2 frame comprises a heat sink.

- 1 20. A connector system, comprising:
- 2 a flexible substrate;
- a plurality of contacts formed on a first surface of the substrate; and
- a plurality of contacts formed on a second surface of the
- 6 substrate, wherein select contacts on the first surface of the
- 7 substrate are off-set from select contacts on the second surface
- 8 of the substrate.
 - 21. The connector system of claim 20, wherein the flexible substrate comprises a laminate material.
 - 22. The connector system of claim 21, wherein the laminate material comprises:
 - a core;
 - a dielectric material surrounding the core; and
 - a solder mask.
- 1 23. The connector system of claim 22, wherein the laminate
- 2 material further includes a plated through hole.

- 1 24. The connector system of \claim 22, further including a
- 2 connection layer between at least one contact on the first
- 3 surface and at least one contact on the second surface.
- 1 25. The connector system of $cla \nmid m$ 22, further including a ground
- 2 shield over the connection layer
 - 26. The connector system of claim 22, wherein the core comprises a material selected from the group consisting of: copper-invar-copper, copper, stainless steel, nickel, iron and molybdenum.
 - 27. The connector system of claim 22, wherein the dielectric material comprises polyimide
 - 28. The connector system of claim of 20, wherein the contacts comprise ball grid array connections.
- 1 29. The connector system of claim 20, further including a
- 2 stiffener frame.

- 1 30. The connector system of claim 29, wherein the stiffener frame
- 2 is removably attached to the flexible substrate.

- 1 31. A method of forming an electronic device, comprising:
- 2 providing a flexible connector having a plurality of
- 3 contacts on a first surface and a plurality of contacts on a
- 4 second surface; and
- attaching the flexible confector between a first substrate
- and a second substrate via the contacts.
 - 32. The method of claim 31, wherein the flexible connector comprises a laminate material.
 - 33. The method of claim 31, wherein the contacts comprises ball grid array connections.
 - 34. The method of claim 31, wherein select contacts on the first surface of the flexible connector are off-set from select contacts on the second surface of the flexible connector.
- 1 35. The method of claim 31, wherein the first substrate comprises
- 2 a chip package.
- 1 36. The method of claim 31, wherein the second substrate
- 2 comprises a printed circuit board.

- 1 37. A method of forming an electronic device, comprising:
- 2 providing a first substrate;
- 3 providing a second substrate;
- 4 providing a flexible connector having a plurality of
- 5 contacts on a first surface of the connector and a plurality of
- 6 contacts on a second surface of the connector, wherein select
- 7 contacts on the first and second surface of the connector are
- 8 off-set; and

- attaching the contacts on the first surface of the connector to the first substrate and the contacts on the second surface of the connector to the second substrate.
 - 38. The method of claim 37, wherein the first substrate comprises a chip package.
 - 39. The method of claim 37, wherein the second substrate comprises a printed circuit board.
- 1 40. The method of claim 37, wherein the flexible connector
- 2 comprises a laminate material.
- 1 41. The method of claim 37, wherein the contacts comprise ball
- 2 grid array connections.

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